CLAIMS

1. An apparatus for injecting a bulking agent into a tissue plane between an esophagus, rectum, or urethra and surrounding sphincter muscle comprising a syringe and a hypodermic needle, wherein said hypodermic needle is comprised of a linear segment extending from a hub of the syringe and an arcuate segment formed by about a 5-45 degree bend located within a position of the needle closest to a needle tip.

2. The apparatus of claim 1 wherein said hypodermic needle has an accurate segment formed by about a 15 degree bend.

3. The apparatus of claim 1 wherein said hypodermic needle has a length of about 1.5-60 inches.

4. The apparatus of claim 1 wherein said hypodermic needle has a length of about 1.5-5 inches.

5. The apparatus of claim 1 wherein said hypodermic needle is sufficiently rigid so as to maintain the arcuate segment while retaining a minimal amount of flexure to allow proper insertion of the needle into tissue.

6. The apparatus of claim 1 wherein a penetration depth shield is located on the linear segment of the hypodermic needle and limits tissue penetration of the needle.

7. The apparatus of claim 1 wherein said syringe contains an injectable solution comprising a bulking agent.

8. A method of using a needle, penetration depth shield, and syringe to inject a bulking agent into a tissue plane between an esophagus, rectum or urethra and surrounding sphincter muscle to treat sphincter deficiencies comprising the steps of

preparing and priming a hypodermic needle comprised of a linear segment extending from a hub of the syringe and an arcuate segment formed by a 15 degree bend located within a portion of the needle closest to a tip of the needle, a penetration depth shield located on said linear segment, and a syringe containing a bulking agent;

advancing the needle slowly until it penetrates past an external sphincter muscle using the 15 degree angle of the needle to guide it in an arc to submucosal tissue between the esophagus, rectum or urethra and a muscle plane;

positioning the needle to confirm placement within the submucosal tissue; and

attaching the syringe to the needle and injecting a bulking agent into the submucosal tissue.

9. The method of claim 8, wherein a cystoscope is inserted into the esophagus, rectum or urethra before penetrating the tissue with the needle to guide placement of the needle.

10. The method of claim 8, wherein said bulking agent is comprised of a plurality of discrete carbon coated particles in a carrier.

11. The method of claim 8, wherein said carbon coated particles are of rounded shape and said dimension is between 200 and 500 microns.

12. A needle kit for treating stress urinary incontinence, comprising:

a syringe;

a hypodermic needle, wherein said hypodermic needle is comprised of a linear segment extending from a hub of the syringe and an arcuate segment formed by a 15 degree bend located within a portion of the needle closest to a tip of the needle;

a penetration depth shield; and

an injectable bulking agent.

13. The kit of claim 12, wherein said bulking agent is comprised of a plurality of discrete carbon coated particles in a carrier.

14. The kit of claim 12, wherein said carbon coated particles are of rounded shape and have an average transverse cross-sectional dimension of between 200 and 500 microns.